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THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

MAILED

MAY 29 1996

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

PAT.&T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKAHIRO HIRAI, TADAHIKO KOBAYASHI
and MASASHI SAHASHI

Appeal No. 94-1506
Application 07/545,628¹

HEARD: May 7, 1996

Before JOHN SMITH, TURNER and WEIFFENBACH, Administrative Patent Judges.

WEIFFENBACH, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is from the examiner's rejection of claims 1, 3-5, and 7-17, 20 and 21. The only other claim remaining in the application, claim 19, has been withdrawn from consideration pursuant to a restriction requirement. We reverse.

¹ Application for patent filed June 29, 1990.

The invention is directed to a method of introducing anisotropy into a magnetic material by scanning the magnetic material with an energy beam to heat the surface so as to impart magnetic anisotropy in regions in a direction perpendicular to the scanning direction. The energy beam can be a laser beam, electron beam, an infrared beam, or an ion beam. Claim 1 is illustrative of the invention:

1. A method of introducing magnetic anisotropy into a magnetic material, comprising:

providing an energy beam having a spot size;

scanning said energy beam in a scanning direction at a scanning rate and scanning pitch thereby to selectively and locally heat a surface of said magnetic material to form a pattern of boundary phases for magnetically dividing a main phase of said magnetic material into a plurality of regions to impart magnetic anisotropy to the divided main phase regions in a direction perpendicular to the scanning direction.

The references of record relied upon by the examiner are:

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|---------------------------------------------|--------------|---------------|
| Neiheisel et al. (Neiheisel) | 4,456,812 | Jun. 26, 1984 |
| Japan '710 (Japanese Patent Application) | JP 01-109710 | Mar. 14, 1981 |
| Japan '412 (Japanese Patent Application) | JP 56-026412 | Mar. 14, 1981 |
| Japan '005 (Japanese Patent Application) | JP 58-067005 | Apr. 21, 1983 |
| Japan '127 (Japanese Patent Application) | JP 58-037127 | Mar. 4, 1983 |

Claims 1, 3-5, 7, 8, and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Japan '710 or Japan '412 or Japan '005 or Neiheisel.

Claims 1, 9-17, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Japan '710 or Japan '412 or Japan '005 or Neiheisel in view of Japan '127.

Opinion

We have carefully reviewed the record before us, including each of the arguments and comments advanced by the appellant and the examiner in support of their respective positions. This review leads us to conclude that the examiner's rejections of the appealed claims are not sustainable for essentially those reasons set forth in the appellants' brief. We do not find that the examiner's legal conclusion is well founded and supported by the prior art. The examiner has not pointed out where Japan '710, Japan '412, Japan '005 or Neiheisel teach or suggest imparting magnetic anisotropy to divided phase regions in a direction perpendicular to the scanning direction. Also, the examiner has not presented cogent reasons for concluding that the spot size of the energy beam, the scanning directions, and the scanning rate and pitch are merely operating

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parameters for using an energy beam, and that the boundary phase size is inherent in the claimed process. Accordingly, the rejections by the examiner under 35 U.S.C. § 103 are reversed.

REVERSED

JOHN D. SMITH
Administrative Patent Judge

Vincent J. Turner
VINCENT TURNER
Administrative Patent Judge

Cameron Weiffenbach
CAMERON WEIFFENBACH
Administrative Patent Judge

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